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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/542,473 04/04/00 IKEDA

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MM92/0502

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MCLEAN VA 22102

EXAMINER

SEFER, A

ART UNIT

PAPER NUMBER

2826

DATE MAILED:

05/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

# Office Action Summary

Application No.

09/542,473

Applicant(s)

IKEDA ET AL.

Examiner

Ahmed N Sefer

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7,10,15,17,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 3,4,8,9,16 and 19 is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5-7, 10, 15, 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yudasaka et al. US Patent No. 5,953,582 in view of Kobayashi et al. US Patent No. 5,767,930.

Yudasaka et al disclose in fig 37D a display device having a pixel portion and a driver circuit portion on the same substrate 701, wherein an active layer of a pixel TFT formed in said pixel portion has a low concentration impurity region 832b, 833b, a channel forming region 831, and a high concentration impurity region 832a, 833a which are formed between a source region 832 and a drain region 833, wherein said channel forming region and said high concentration impurity region are formed under a gate electrode, and a region of low concentration impurity that does not overlap with the gate electrode (as in claim 6) but does not disclose that said low concentration impurity region partially overlaps with said gate electrode with a gate insulating film interposed therebetween. However, Kobayashi et al disclose a low concentration impurity region 18 overlaps (partially overlaps) with a gate electrode 14 with a gate insulating film 3 interposed therebetween (as in claims 1, 15 and 18) (see figure 9 and col. 16, lines 45-47). Therefore, it would have been obvious to one skilled in the art at the time the

invention was made to have designed between a region of low concentration impurity overlapping with a gate electrode and a gate insulating film interposed in between so as to improve the withstand drain voltage of the driver circuit thereby increasing its power source.

As to the two channel forming regions or the high concentration impurity regions formed between the channel forming regions recited in claims 15 and 18, it would have been obvious to one of ordinary skill in the art to as "merely a matter of obvious engineering choice", since the integration of multiple pieces into one piece or conversely, using multiple pieces in replacing a single piece or rearranging elements within a device does not carry any patentable weight.

In regards to claims 2 and 7, Yudasaka et al disclose low and high concentration impurity regions that contain phosphorous within the range of the claimed concentration (see col. 36, lines 3-10).

As for claims 5,10,17 and 20, the prior art omits that electronic equipment selected from the group consisting of a video camera, a digital camera and other various electronic equipment. However, Examiner takes Official Notice that an electronic equipment comprising a display device wherein said electronic equipment selected from the group consisting of a video camera or a digital camera is conventional and well known. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have used any of the various electronic equipment since Examiner takes Official Notice that due to their low power consumption, displays have become a necessary and indispensable structural element of an electronic equipment.

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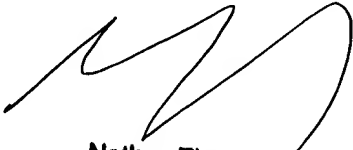
***Allowable Subject Matter***

3. Claims 3,4,8,9,16 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ahmed N Sefer whose telephone number is (703) 605-1227.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on (703) 308-6601.

ANS  
April 12, 2001



Nathan Flynn  
Primary Examiner